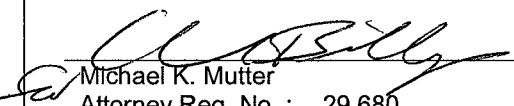
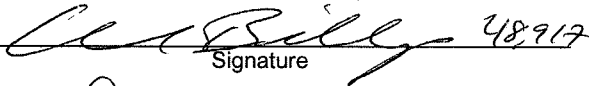


TRANSMITTAL OF APPEAL BRIEF			Docket No. 1291-0146PUS2
In re Application of: Lennart Stridsberg			
Application No. 10/823,623-Conf. #4653	Filing Date April 14, 2004	Examiner J. J. Restifo	Group Art Unit 3618
Invention: A HYBRID POWERTRAIN			
<p style="text-align: center;"><b><u>TO THE COMMISSIONER OF PATENTS:</u></b></p> <p>Transmitted herewith is the Appeal Brief in this application, with respect to the Notice of Appeal filed: <u>September 29, 2008</u> .</p> <p>The fee for filing this Appeal Brief is <u>\$ 270.00</u> .</p> <p><input type="checkbox"/> Large Entity      <input checked="" type="checkbox"/> Small Entity</p> <p><input checked="" type="checkbox"/> A petition for extension of time is also enclosed.</p> <p>The fee for the extension of time is <u>\$ 65.00</u> .</p> <p><input type="checkbox"/> A check in the amount of _____ is enclosed.</p> <p><input checked="" type="checkbox"/> Charge the amount of the fee to Deposit Account No. <u>02-2448</u> .</p> <p><input type="checkbox"/> Payment by credit card. Form PTO-2038 is attached.</p> <p><input checked="" type="checkbox"/> The Director is hereby authorized to charge any additional fees that may be required or credit any overpayment to Deposit Account No. <u>02-2448</u> .</p> <div style="display: flex; justify-content: space-between; align-items: flex-end; margin-top: 20px;"><div style="width: 60%;"> Michael K. Mutter Attorney Reg. No. : 29,680 BIRCH, STEWART, KOLASCH &amp; BIRCH, LLP 8110 Gatehouse Road Suite 100 East P.O. Box 747 Falls Church, Virginia 22040-0747 (703) 205-8000</div><div style="width: 35%; text-align: right;"><u>48,912</u> Dated: <u>December 5, 2008</u></div></div>			

<b>PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a) FY 2009</b> <i>(Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).)</i>		Docket Number (Optional) 1291-0146PUS2	
Application Number      10/823,623-Conf. #4653		Filed      April 14, 2004	
For    A HYBRID POWERTRAIN			
Art Unit      3618		Examiner      J. J. Restifo	
This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above identified application.			
The requested extension and fee are as follows (check time period desired and enter the appropriate fee below):			
	<u>Fee</u>	<u>Small Entity Fee</u>	
<input checked="" type="checkbox"/> One month (37 CFR 1.17(a)(1))	\$130	\$65	\$ 65.00
<input type="checkbox"/> Two months (37 CFR 1.17(a)(2))	\$490	\$245	\$ _____
<input type="checkbox"/> Three months (37 CFR 1.17(a)(3))	\$1110	\$555	\$ _____
<input type="checkbox"/> Four months (37 CFR 1.17(a)(4))	\$1730	\$865	\$ _____
<input type="checkbox"/> Five months (37 CFR 1.17(a)(5))	\$2350	\$1175	\$ _____
<input checked="" type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27.			
<input type="checkbox"/> A check in the amount of the fee is enclosed.			
<input type="checkbox"/> Payment by credit card. Form PTO-2038 is attached.			
<input checked="" type="checkbox"/> The Director has already been authorized to charge fees in this application to a Deposit Account.			
<input checked="" type="checkbox"/> The Director is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number <u>02-2448</u> .			
<b>WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.</b>			
I am the <input type="checkbox"/> applicant/inventor.			
<input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).			
<input checked="" type="checkbox"/> attorney or agent of record. Registration Number <u>29,680</u>			
<input type="checkbox"/> attorney or agent under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 _____			
 Signature		<u>December 5, 2008</u> Date	
<u>Michael K. Mutter</u> Typed or printed name		<u>(703) 205-8000</u> Telephone Number	
NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.			
<input type="checkbox"/> Total of <u>1</u> forms are submitted.			

Under the Paperwork Reduction Act of 1995, no person are required to respond to a collection of information unless it displays a valid OMB control number

<p><i>Effective on 12/08/2004.</i> <i>Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).</i></p> <h2 style="margin: 0;">FEE TRANSMITTAL</h2> <h3 style="margin: 0;">For FY 2009</h3>		<p><b>Complete if Known</b></p>	
<input checked="" type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27		Application Number	10/823,623-Conf. #4653
		Filing Date	April 14, 2004
		First Named Inventor	Lennart Stridsberg
		Examiner Name	J. J. Restifo
		Art Unit	3618
TOTAL AMOUNT OF PAYMENT		(\$)	335.00
		Attorney Docket No.	1291-0146PUS2

**METHOD OF PAYMENT** (check all that apply)

☐ Check   
 ☐ Credit Card   
 ☐ Money Order   
 ☐ None   
 ☐ Other (please identify): \_\_\_\_\_

☒ Deposit Account   
 Deposit Account Number: 02-2448   
 Deposit Account Name: Birch, Stewart, Kolasch & Birch, LLP

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☒ Charge fee(s) indicated below   
 ☐ Charge fee(s) indicated below, **except for the filing fee**

☒ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17   
 ☒ Credit any overpayments

**FEE CALCULATION**

**1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	<u>Small Entity</u> Fee (\$)	Fee (\$)	<u>Small Entity</u> Fee (\$)	Fee (\$)	<u>Small Entity</u> Fee (\$)	
Utility	330	165	540	270	220	110	
Design	220	110	100	50	140	70	
Plant	220	110	330	165	170	85	
Reissue	330	165	540	270	650	325	
Provisional	220	110	0	0	0	0	

**2. EXCESS CLAIM FEES**

Fee Description	Fee (\$)	<u>Small Entity</u> Fee (\$)
Each claim over 20 (including Reissues)	52	26
Each independent claim over 3 (including Reissues)	220	110
Multiple dependent claims	390	195

<b>Total Claims</b> _____ - or HP = _____ x _____ = _____ HP = highest number of total claims paid for, if greater than 20.	<b>Extra Claims</b> _____ x _____ = _____ <b>Fee (\$)</b>	<b>Fee Paid (\$)</b> _____		<b>Multiple Dependent Claims</b> <b>Fee (\$)</b> <b>Fee Paid (\$)</b> _____      _____
<b>Indep. Claims</b> _____ - or HP = _____ x _____ = _____ HP = highest number of independent claims paid for, if greater than 3.	<b>Extra Claims</b> _____ x _____ = _____ <b>Fee (\$)</b>	<b>Fee Paid (\$)</b> _____		

**3. APPLICATION SIZE FEE**

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$270 (\$135 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
_____ - 100 = _____	_____	_____ /50 = _____ (round up to a whole number) x _____	_____	_____

**4. OTHER FEE(S)**

	Fees Paid (\$)
Non-English Specification, \$130 fee (no small entity discount)	
Other (e.g., late filing surcharge): 2402 Filing a brief in support of an appeal	270.00
2251 Extension for response within first month	65.00

<b>SUBMITTED BY</b>			
Signature		Registration No. (Attorney/Agent)	29,680
Name (Print/Type)	Michael K. Mutter	Telephone	(703) 205-8000
		Date	December 5, 2008

Docket No.: 1291-0146PUS2  
(PATENT)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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In re Patent Application of:  
Lennart STRIDSBERG

Application No.: 10/823,623

Confirmation No.: 4653

Filed: April 14, 2004

Art Unit: 3618

For: A HYBRID POWER TRAIN

Examiner: J. J. Restifo

**APPEAL BRIEF**

MS Appeal Brief - Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Madam:

This brief is filed in accordance with 37 CFR § 41.37, is being filed within in accordance with the Notice of Appeal filed September 29, 2008.

The fees required under § 41.20(b)(2) are dealt with in the accompanying TRANSMITTAL OF APPEAL BRIEF.

**I. REAL PARTY IN INTEREST**

The real party in interest for this appeal is:

Stridsberg Powertrain AB, Folkungagatan 56 Stockholm, Sweden SE-11622

**II. RELATED APPEALS AND INTERFERENCES**

There are no other appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

**III. STATUS OF CLAIMS**

**A. Total Number of Claims in Application**

There are 14 claims pending in application.

**B. Current Status of Claims**

1. Claims 1-14 are pending.
2. Claims 1, 6, 10 and 11 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Eggert, Jr. (US 4,267,895)
3. Claims 2-4, 7-9 and 12-14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Eggert, Jr. in view of Ishida et al. (US 5,705,865)

**C. Claims on Appeal**

The claims on appeal are independent claims 1-9 and 11-14.

**IV. STATUS OF AMENDMENTS**

Applicant filed an Amendment on December 6, 2007, in response to a Non-Final Office Action dated June 7, 2007 amending claims 1, 6 and 11. The Examiner responded to the Amendments by providing a Final Office Action

dated March 31, 2008 maintaining his previous arguments.

Accordingly, the claims enclosed herein as Appendix A are representative of the amended claims in the Amendment filed on December 6, 2007.

## **V. SUMMARY OF CLAIMED SUBJECT MATTER**

With respect to independent claim 1 the claimed invention is directed to A powertrain of a vehicle having wheels, the powertrain comprising a thermal engine (see figs 4a and 4b, element 403 and fig. 6, specification pages 7-8) having an output shaft, which when required can be mechanically connected to at least one of the wheels (see figs. 4a and 4b element 408) for driving the at least one of the wheels, an energy storage device (see figs. 4a and 4b, element 404, specification pages 7-8), an electric motor (see figs. 4a and 4b, elements 401 and 409 and fig. 6), which is mechanically connected to the thermal engine or to the at least one wheel and which is electrically connected to the energy storage device and is supplied with electric power from the energy storage device for supplying or receiving mechanical power or torque when required, wherein at least part of filtered air (see fig. 6 and specification page 25, lines 14-34) from an air filter for supplying filtered air to the thermal engine is redirected to pass in such a way that at least some internal parts of the electric motor (see fig.6) will obtain cooling from the filtered air.

With respect to dependent claim 2, the claimed invention is directed to wherein at least part of the filter air is made to pass through an airgap of the electric motor (see fig. 6 and specification page 25, lines 14-34).

With respect to dependent claim 3, the claimed invention is directed to wherein at least part of the air is made to pass along permanent magnets of the electric motor (see fig. 6 and specification page 25, lines 14-34).

With respect to dependent claim 4, the claimed invention is directed to wherein at least part of the air is made to pass between windings of the electric motor (see fig. 6 and specification page 25, lines 14-34).

With respect to Independent claim 6, the claimed invention is directed to a powertrain of a vehicle having wheels (see figs. 4a and 4b element 408), the powertrain including a thermal engine (see figs 4a and 4b, element 403 and fig. 6, specification pages 7-8) and an electric motor (see figs. 4a and 4b, elements 401 and 409 and fig. 6) for selectively driving at least one of the wheels, the electric motor comprising an inlet (see fig. 6 and specification page 25, lines 14-34) for receiving filtered air from an air filter for supplying filtered air to the thermal engine; and channels for receiving said filtered air and directing the filtered air to pass in such a way that at least some internal parts of the electric motor will obtain cooling from said filtered air (see fig. 6 and specification page 25, lines 14-34).

With respect to dependent claim 7, the claimed invention is directed to wherein said channels include an airgap between a stator and a rotor of the electric motor (see fig. 6 and specification page 25, lines 14-34) .

With respect to dependent claim 8, the claimed invention is directed to wherein said channels include channels passing along permanent magnets of the electric motor (see fig. 6 and specification page 25, lines 14-34) .

With respect to dependent claim 9, the claimed invention is directed to wherein said channels include channels passing between windings of the electric motor (see fig. 6 and specification page 25, lines 14-34).

With respect to dependent claim 11, the claimed invention is directed to a vehicle having wheels (see figs. 4a and 4b element 408) and a powertrain including a thermal engine (see figs 4a and 4b, element 403 and fig. 6,

specification pages 7-8) and a electric motor (see figs. 4a and 4b, elements 401 and 409 and fig. 6) for selectively driving at least one wheel of the vehicle, a method of cooling the electric motor comprising, passing a flow of air to the thermal engine through an air filter to produce filtered air (see fig. 6 and specification page 25, lines 14-34); and providing at least part of the filtered air from the air filter to the inside of the electric motor to provide cooling thereof (see fig. 6 and specification page 25, lines 14-34).

With respect to dependent claim 12, the claimed invention is directed to wherein at least part of the filtered air is made to flow through an airgap between a stator and rotor of the electric motor (see fig. 6 and specification page 25, lines 14-34).

With respect to dependent claim 13, the claimed invention is directed to wherein at least part of the filtered air is made to flow along permanent magnets of the electric motor (see fig. 6 and specification page 25, lines 14-34).

With respect to dependent claim 14, the claimed invention is directed to wherein at least part of the filtered air is made to flow between windings of the electric motor (see fig. 6 and specification page 25, lines 14-34).

## **VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

The Final Office Action dated March 31, 2008 provide the following grounds of rejection for review on appeal:

1. Claims 1, 6, 10 and 11 stand rejected under 35 U.S.C. § 102(b) as being anticipated by *Eggert, Jr.* (US 4,267,895)
2. Claims 2-4, 7-9 and 12-14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Eggert, Jr.* in view of *Ishida et al.* (US 5,705,865)



**VII. ARGUMENT****A. The Examiner has Failed to Establish *Prima Facie* Anticipation by Failing to Provide a Reference that Discloses All of the Claim Elements**

The Examiner has made clear errors in interpreting and applying the appropriate tests and applying the prior art in rejecting independent claims 1, 6 and 11 under 35 U.S.C. § 102(b) as allegedly being anticipated by *Eggert*. The Examiner has made a clear error in contending that the *Eggert* discloses all of the elements of claims 1, 6 and 11. In order to establish a *prima facie* case of anticipation under 35 U.S.C. §102, the cited reference must teach or suggest each and every element in the claims. See *M.P.E.P.* §2131; *M.P.E.P.* §706.02. Accordingly, if the cited reference fails to teach or suggest one or more claimed elements, the rejection is improper and must be withdrawn.

**Independent Claims 1, 6 and 11:**

Independent claim 1 recites a powertrain of a vehicle having wheels, the powertrain comprising, *inter alia*, “at least part of filtered air from an air filter for supplying filtered air to the thermal engine is redirected to pass in such a way that at least some internal parts of the electric motor will obtain cooling from the filtered air.”

Independent claim 6 recites a powertrain of a vehicle having wheels, the powertrain including a thermal engine and an electric motor fro selectively driving at least one of the wheels, the electric motor comprising, *inter alia*, “an inlet for receiving filtered air from an air filter for supplying filtered air to the thermal engine; and channels for receiving said filtered air and directing the filtered air to pass in such a way that at least some internal parts of the electric motor will obtain cooling from said filtered air.

Independent claim 11 recites a vehicle having wheels and a powertrain including a thermal engine and a electric motor for selectively driving at least one wheel of the vehicle, a method of cooling the electric motor comprising, *inter alia*, “passing a flow of air to the thermal engine through an air filter to produce filtered air; and providing at least part of the filtered air from the air filter to the inside of the electric motor to provide cooling thereof.”

Appellants respectfully submit that Eggert does not teach at least the above features of claims 1, 6 and 11.

According to the present invention, in a hybrid vehicle having both a thermal engine and electric motor, filtered air used for the intake of a thermal engine is partially diverted to cool specific internal parts and areas of an electric motor. In the electric motor specific internal parts when directly cooled allow the motor to operate efficiently. These internal parts are sensitive to particulates and dirt and thus must be cooled by filtered air to maintain their efficiency and proper functional characteristics. In embodiments of the present invention to reach these specific internal parts, particular channels have been created to direct the airflow over these internal parts.

The Examiner relies upon Eggert to teach of the claimed elements of claims 1, 6 and 11. Eggert teaches an automotive vehicle in which air is supplied to an thermal engine flywheel 59 through air intake vent 67. This same air is also directed to flow over the top of an electric motor 61. See Fig. 4.

The Examiner asserts that intakes 66 and 67 have “grates that would filter out leaves and other large debris, further, conventional air intakes on vehicles have grates and screens in order to filter out bugs and debris.” Appellants respectfully submit that such air vent intakes cannot be considered an “air filter” as understood by one of ordinary skill in the art. The grates 66 and 67 are “vents” that intake air, they certainly cannot provide “filtered” air.

An “air filter” is defined by Websters Dictionary as “a porous article or mass through which a gas or liquid is passed to separate out matter in suspension.” Other definitions of an “air filter” include “an article for removing particulate material from an air stream,” and “prevent particulates including dust and dirt from entering an engine.” These are conventional well understood definitions of “air filter” all relating to removing small particulates from an air stream and as defined with car engines, removing particulates, dirt, dust etc. from the air to allow clean air to enter the engine. Certainly Eggert’s grates 66 and 67 cannot perform such tasks.

A “vent” is defined by Websters Dictionary as “an opening for the passage of or escape of a liquid, gas, or vapor.” Indeed, Eggert’s grates are designed as “vents” as an opening to intake air and not provide “filtered” air as understood the conventional teachings of “air filters” and used in applicant’s claims. Eggert describes that the opening of the vents may include screens 84. See fig. 7. These screens are not filters in the sense of providing “filtered air” as understood by one of ordinary skill. Certainly they keep leaves, bugs etc, from entering the vent, but this is nothing more that what a grill on the front of a car would perform. An analogy of filtered water is equally relevant to filtered air. Just because water through a faucet travels through the mesh screen at the end of the faucet, one would not consider this “filtered water” as understood by those of ordinary skill in the art. The same applies to air filters. “Filtered air” as a term of art, involves the removal of particulates in the air, not merely providing air through a vent and screen mesh.

Further, an air filter is always included as part of a thermal engine, such as internal combustion engines. Such an air filter (not air intake vent) would most likely be included in thermal engine 56. With reference to the drawings of Eggert and the description therein, it is clear that no “filtered” air (from an air filter) is redirected from the thermal engine to pass and cool the internal parts

of an electric motor 61. Appellants note that claims 1, 6 and 11 define that filtered air is intended for the internal parts of the electric engine and not simply the outer parts of the electric engine. Only clean filtered air would be suitable for internal parts of the electric motor. Thus, filtered air intended for the thermal engine is appropriate for such function. Eggert fails to teach using filtered air redirected from the thermal engine to cool at least some internal parts of the electric engine.

As taught by Eggert the air from the vents is partially directed to flow over the engine compartment including over the top of the electric motor. First, as discussed above this is not "filtered air." Second, the air is directed to flow over the electric motor, not directed at internal parts of the electric motor.

The Examiner states on page 3 last line of paragraph 5 of the Office Action dated March 31, 2008:

With respect to the added limitation of the internal parts of the motor being cooled, as the outside of the motor is cooled the internal parts will as a result be cooled as well.

There is no teaching of this in Eggert. Further, this is not necessarily true. When an engine is running the internal parts create their own heat which may never cool unless direct cooling is applied to these parts. Simply cooling the outside of a motor (the shell) does not mean that this cooling will penetrate to the internal parts of the motor. In fact the energy of the air cooling is likely to never penetrate to the internal parts of the motor. The Examiner's assumption is certainly not taught by Eggert, further it is not based on any facts and thus amounts to nothing more than conjecture.

There is nothing in Eggert that teaches anything more beyond rudimentary cleaning of the air to remove large items from entering the plenum chamber 57, but not filter the air. The air is passed over the outer casings of

the engine components, but not used to cool the internal parts of the electric motor. Thus, Eggert fails to teach the above noted features of independent claims 1, 6 and 11 as required.

Accordingly, Appellants submit that the Examiner has failed to provide a *prima facie* showing of anticipation based upon *Eggert*, at least given that *Eggert* fails to teach or suggest all of the claimed limitations.

**B. The Examiner has Failed to Establish *Prima Facie* Obviousness by Failing to Provide References that Teach or Suggest All of the Claim Elements**

The Examiner has made clear error in rejecting claims 2-4, 7-9 and 12-14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Eggert, Jr. in view of Ishida et al. (US 5,705,865). The Examiner has made clear error in contending that Eggert and Ishida teach or suggest all of the elements of claims 2-4, 7-9 and 12-14, either alone or in combination. For a 35 U.S.C. § 103 rejection to be proper, a *prima facie* case of obviousness must be established. See M.P.E.P. 2142. One requirement to establish *prima facie* case of obviousness is that the prior art references, when combined, must teach or suggest all claim limitations. See M.P.E.P. 2142; M.P.E.P. 706.02(j). Thus, if the cited references fail to teach or suggest one or more elements, then the rejection is improper and must be withdrawn.

**Dependent Claims 2-4, 7-9 and 12-14:**

Claim 2 recites, *inter alia*, “wherein at least part of the filtered air is made to pass through an airgap of the electric motor.”

Claim 3, recites, *inter alia*, “wherein at least part of the air is made to pass along permanent magnets of the electric motor.”

Claim 4, recites, *inter alia*, “wherein at least part of the air is made to

pass between windings of the electric motor.”

Claim 7, recites, *inter alia*, “wherein said channels include an airgap between a stator and a rotor of the electric motor.”

Claim 8, recites, *inter alia*, “wherein said channels include channels passing along permanent magnets of the electric motor.”

Claim 9, recites, *inter alia*, “wherein said channels include channels passing between windings of the electric motor.”

Claim 12, recites, *inter alia*, “wherein at least part of the filtered air is made to flow through an airgap between a stator and rotor of the electric motor.”

Claim 13, recites, *inter alia*, “wherein at least part of the filtered air is made to flow along permanent magnets of the electric motor.”

Claim 14, recites, *inter alia*, “wherein at least part of the filtered air is made to flow between windings of the electric motor.”

Appellants note that each of claims 2-4 refer to the specific areas of where the filtered air is made to pass in the electric motor. Each claim refers to different specifically claimed areas.

Also, claim 12-14 also refer to specific areas of where the filtered air made to flow in the electric motor.

Claims 7-9 refer to channels in the electric motor that direct air flow to specifically claimed areas of the electric motor.

The Examiner has applied Ishida to teach these features. Appellants respectfully submit that Ishida does not teach the specific features of directing

filtered air flow at the specific internal parts of an electric motor in the manner claimed by Appellants. Furthermore, there is no teaching or suggestion in Ishida of directing air flow using specific channels.

What Ishida teaches is a low voltage electric motor that uses a fan for introducing air into the motor. The fan acts to blow air onto the coils of the electric motor in the case of Ishida an alternator. Appellants respectfully submit that the cooling fan of Ishida does not act as an air filter and the cooling fan is designed only for an electric motor, and thus not part of a thermal engine.

More specifically, Ishida discloses a design to improve the cooling of what obviously is a generator for a 12 V DC system in a conventional car. It has stator windings 34 and 34R and a rotor without permanent magnets but with a DC activated armature coil 32 in the rotor. The rotor armature coil is fed over two slip ring brushes. By adjusting the armature current, the output voltage can be kept at a desired value for all speeds over a certain lower limit.

Ishida does not have to worry about sand, dust and other pollutants being supplied by the air streams "a" and "b" passing the stator coil 34R. The voltage over the stator coils are suitable to charge a 12 V battery and are therefore in the order of 17 volts peak to peak, phase to phase and some 10 V peak over one phase.

The traction motors in a hybrid have coils fed by a battery of some 200 to 600 volt over switch transistors that causes the coil voltage to switch from, for example, +400 V to - 400 V in a fraction of a microsecond. This causes ringing that increases the peak voltages with some 50%. Pollution of surfaces is not a problem for the 10 V phase voltage of Ishida. It would be a major problem for a traction motor with 600 V peak over its coils.

As Ishida's machine is a generator (alternator), it will not generate any current unless it runs at a considerable speed. It can therefore use a fan assembled on its own shaft. If it is rotating slowly there will not be much air pressure, but no current and therefore no stator coil heating. A traction motor powering a car uphill in a traffic congestion has to supply lots of torque at no or a very low speed. It therefore requires a cooling system that is independent of its own speed. Thus, Ishida's teachings cannot be relied upon to teach aspects of the claimed invention.


Accordingly, Appellants respectfully submit that the Examiner has made clear error in rejecting claims 2-4, 7-9 and 12-14 under §103(a) by failing to provide a *prima facie* showing of obviousness.

#### **VIII. CLAIMS**

A copy of the claims involved in the present appeal is attached hereto as Appendix A. indicated above.

Dated: December 5, 2008

Respectfully submitted,

By  48912  
Michael K. Mutter  
Registration No.: 29,680  
BIRCH, STEWART, KOLASCH & BIRCH, LLP  
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P.O. Box 747  
Falls Church, Virginia 22040-0747  
(703) 205-8000  
Attorney for Applicant



**APPENDIX A**

Claims Involved in the Appeal of Application Serial No. 10/823,623

1. A powertrain of a vehicle having wheels, the powertrain comprising
  - a thermal engine having an output shaft, which when required can be mechanically connected to at least one of the wheels for driving the at least one of the wheels,
  - an energy storage device,
  - an electric motor, which is mechanically connected to the thermal engine or to the at least one wheel and which is electrically connected to the energy storage device and is supplied with electric power from the energy storage device for supplying or receiving mechanical power or torque when required,wherein at least part of filtered air from an air filter for supplying filtered air to the thermal engine is redirected to pass in such a way that at least some internal parts of the electric motor will obtain cooling from the filtered air.
2. A powertrain according to claim 1, wherein at least part of the filter air is made to pass through an airgap of the electric motor.
3. A powertrain according to any of claims 1-2, wherein at least part of the air is made to pass along permanent magnets of the electric motor.
4. A powertrain according to claims 1-2, wherein at least part of the air is made to pass between windings of the electric motor.

6. A powertrain of a vehicle having wheels, the powertrain including a thermal engine and an electric motor for selectively driving at least one of the wheels, the electric motor comprising:

- an inlet for receiving filtered air from an air filter for supplying filtered air to the thermal engine; and

- channels for receiving said filtered air and directing the filtered air to pass in such a way that at least some internal parts of the electric motor will obtain cooling from said filtered air.

7. The powertrain of claim 6, wherein said channels include an airgap between a stator and a rotor of the electric motor.

8. The powertrain of claim 6, wherein said channels include channels passing along permanent magnets of the electric motor.

9. The powertrain of claim 6, wherein said channels include channels passing between windings of the electric motor.

11. In a vehicle having wheels and a powertrain including a thermal engine and a electric motor for selectively driving at least one wheel of the vehicle, a method of cooling the electric motor comprising:

- passing a flow of air to the thermal engine through an air filter to produce filtered air; and

- providing at least part of the filtered air from the air filter to the inside of the electric motor to provide cooling thereof.

12. The method of claim 11, wherein at least part of the filtered air is made to flow through an airgap between a stator and rotor of the electric motor.

13. The method of claim 11, wherein at least part of the filtered air is made to flow along permanent magnets of the electric motor.

14. The method of claim 11, wherein at least part of the filtered air is made to flow between windings of the electric motor.

**APPENDIX B**

No evidence pursuant to §§ 1.130, 1.131, or 1.132 or entered by or relied upon by the examiner is being submitted.

**APPENDIX C**

No related proceedings are referenced in II. above, hence copies of decisions in related proceedings are not provided.